Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency's Science Advisory Board
Ecological Processes and Effects Committee

May 25, 2012

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced in a *Federal Register* Notice on March 4, 2012 (77 FR 20396-20398) that it was inviting nominations of experts to be considered for the Administrator's appointment to the SAB Ecological Processes and Effects Committee (EPEC). The EPEC provides independent advice through the chartered SAB to the EPA Administrator on technical issues related to science and research to protect and restore the health of ecosystems. For EPEC, the SAB Staff office sought nominations of experts in aquatic ecology, ecological risk assessment, ecotoxicology, landscape ecology, statistics, and terrestrial ecology.

The SAB Staff Office identified 12 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for appointment or reappointment for consideration by the SAB Staff Office. Comments should be submitted to Dr. Thomas Armitage, Designated Federal officer no later than June 15, 2012 at armitage.thomas@epa.gov. E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

Ecological Processes and Effects Committee Candidates

Alber, Merryl

University of Georgia

Dr. Merryl Alber is a Professor in the Department of Marine Sciences at the University of Georgia. She is a marine ecologist who specializes in estuarine ecology and coastal policy. Dr. Alber is the Project Director of the National Science Foundation (NSF) sponsored Georgia Coastal Ecosystems Long Term Ecological Research program, which is focused on the effects of climate change and human activities on salt marshes and estuaries. She is also active in efforts to improve communication between scientists and coastal managers, and to that end has established the Georgia Coastal Research Council, which works closely with the State coastal management program. Dr. Alber has been on the faculty of the University of Georgia since 1994, where she teaches graduate and undergraduate courses in marine biology, marine ecology, and coastal policy. Dr. Alber is currently on the editorial boards of Estuarine, Coastal and Shelf Sciences and Biogeochemistry, and is the Editor of Coastal and Estuarine Science News. She has also served on the Board of the Coastal and Estuarine Research Federation as well as a Heinz Center panel on Coastal Management Performance Measures and Indicators. Dr. Alber's research is currently funded by grants from the National Science Foundation (Georgia Coastal Ecosystems LTER Program), the Georgia Coastal Management Program (Georgia Coastal Research Council; Wrack Disturbance in Salt Marsh Communities), Georgia Sea Grant (Georgia Coastal Research Council), and the National Park Service (South Atlantic Coast Water Quality Metadata Database). Dr. Alber holds a B.S. in Zoology/Botany from Duke University and a Ph.D. in Biology from the Boston University Marine Program.

Boyer, Elizabeth

Penn State University

Dr. Elizabeth Boyer is an Associate Professor of Water Resources in the Department of Ecosystem Science and Management at the Pennsylvania State University. She serves as Director of the Pennsylvania Water Resources Research Center, and as Assistant Director of Penn State Institutes of Energy & the Environment. Prior to her current position, Boyer served on the faculty at the State University of New York at Syracuse and at the University of California at Berkeley. She holds a B.S. degree in Geography from the Pennsylvania State University, and M.S. and Ph.D. degrees in Environmental Sciences from the University of Virginia. Dr. Boyer's research explores coupled hydrological and biogeochemical processes that affect water quality and quantity. She is particularly interested in how human activities and environmental variability influence conditions and trends in streams, rivers, and estuaries. Dr. Boyer is a member of the American Geophysical Union, American Water Resources Association, American Society of Limnology and Oceanography, and the Society for Freshwater Science. She has Chaired the American Geophysical Union's technical committee on Water Quality, and has Chaired the international Gordon Research Conference on Catchment Science: Interactions of Hydrology, Biology and Geochemistry. Dr. Boyer's current research focuses on quantifying impacts of acidic deposition and mercury deposition on water quality (funded by the Pennsylvania Department of Environmental Protection and the U.S. Environmental Protection Agency); characterizing carbon and nitrogen cycling in watersheds (funded by the National Science Foundation and by the U.S. Department of Agriculture); and understanding impacts of shale gas development on water resources (funded by the U.S. Forest Service).

Buchwalter, David

North Carolina State University

Dr. David Buchwalter is an associate professor and coordinator of the Environmental Concentration within the Department of Environmental and Molecular Toxicology at North Carolina State University. In addition, he is an associate faculty member in the Department of Entomology, and in the Department of Biology at North Carolina State University. Dr. Buchwalter holds a B.S. in Zoology from the University of Massachusetts, Amherst, an M.S. in Toxicology from Oregon State University, and a Ph.D. in Environmental & Molecular Toxicology from Oregon State University. He received a National Research Council (NRC) post doctoral fellowship to study trace metals with Dr. Samuel Luoma at the U.S. Geological Survey in Menlo Park, CA for three years prior to beginning his current position. He maintains an active research program focused on the physiology and toxicology of metals and other inorganics, primarily with aquatic insects as the key faunal group of interest. Dr. Buchwalter's laboratory also actively researches thermal and hypoxia biology in aquatic insects. Dr. Buchwalter's current projects include the development of a parthenogenetic mayfly as an ecotoxicological model organism, a National Science Foundation-funded comparative/evolutionary physiology study, and evaluation of how water chemistry changes associated with mountaintop removal coal mining affect the physiology of aquatic insects. Dr. Buchwalter's research is currently funded by grants from the U.S. Geological Survey (Temperature Tolerance for Macroinvertebrates); Oak Ridge Associated Universities (Bioaccumulation of Trace elements of Coal Ash); and the National Science Foundation (Physiology in Stream Insects). He has published 25 peer-reviewed research articles (including a 2008 Proceedings of the National Academy of Sciences publication) and 4 book chapters. Dr. Buchwalter is an active member of the Society of Environmental Toxicology and Chemistry, the Society for Freshwater Sciences, and the Society for Integrative and Comparative Biology, and a regular reviewer for journals such as Environmental Science and Technology and Aquatic Toxicology.

Clements, William

Colorado State University

Dr. William H. Clements is a Professor in the Department of Fish, Wildlife and Conservation Biology and a faculty advisor in the Graduate Degree Program in Ecology at Colorado State University. Dr. Clements holds a B.S and M.S. in Biology from Florida State University, and a Ph.D. in Zoology from Virginia Tech. Dr. Clements has been on the faculty of the Colorado State University since 1989. Dr. Clements' research interests focus primarily on community and ecosystem responses to contaminants. He is especially interested in questions that address responses to multiple perturbations and interactions between contaminants and global climate change. He is the author/co-author of two textbooks in ecotoxicology (Community Ecotoxicology and Ecotoxicology: a Comprehensive Treatment) and has published numerous peer-reviewed papers and book chapters in ecotoxicology. At Colorado State University he teaches graduate and undergraduate courses in ecology, experimental design, and pollution ecology. Dr. Clements is active in several professional societies including the Society of Environmental Toxicology and Chemistry (SETAC) and the Society of Freshwater Science (SFS). He previously chaired the Executive Committee for SFS, served on the Board of Directors of SETAC and received the Presidential Citation from this Society in 2006. He currently

serves as an Associate Editor for the journal Freshwater Science (formerly the Journal of the North American Benthological Society) and has previously served on the Editorial Board of SETAC (1995-1997), as a Guest Editor for the Journal of Ecosystem Stress and Recovery (2000) and Ecological Applications (2007). At the national level, Dr. Clements has served on a Department of Interior Federal Advisory Committee and on two separate National Academy of Sciences National Research Council committees investigating effects of dredging operations at U.S. EPA Superfund Sites and effects of coalbed methane development in the West. He served on a U.S. EPA Science Advisory Board panel that provided advice on effects of mountaintop mining (2010-2012). Current research in Dr. Clements' laboratory is funded by the National Institute of Environmental Health Sciences (remediation effectiveness for mining sites); the Colorado Division of Wildlife (quantitative assessment restoration effectiveness in the Arkansas River); the International Copper Association (the use of stream microcosms to quantify restoration effectiveness in metal-contaminated streams); the U.S. Geological Survey (metal uptake and transfer in stream and riparian communities); and the U.S. Environmental Protection Agency STAR Program (impact of climate change and variability on the Nation's water quality and ecosystem state).

Coleman, Nancy

Environmental Consultants

Dr. Nancy Coleman is an environmental toxicologist and public health professional with 30 years of experience in risk assessment for environmental media, including groundwater, surface water, and drinking water. Currently, she is the principal for Environmental Consultants in Oklahoma City. Environmental Consultants offers environmental toxicological and risk assessment services to a variety of industrial clients and environmental consulting firms. Dr. Coleman has prepared numerous human health ecological risk assessments for facilities being considered under Brownfields and Voluntary Cleanup Programs as well as the Superfund program. Prior to entering consulting, she was the toxicologist and epidemiologist for the Oklahoma Department of Environmental Quality and its predecessor, the Environmental Division of the Oklahoma State Department of Health (1985 - 1994). She also has served as a sanitarian and as a laboratory manager for an environmental laboratory (1978 - 1985). Dr. Coleman's area of research activity includes the potential effects of chemicals utilized in the production of oil and natural gas on surface and groundwater resources, variability of naturally-occurring substances in domestic wells, and risk evaluation of contaminants on potential drinking water supplies. Research funding is supplied through Environmental Consultants. She has served on the Oklahoma Corporation Commission Risk Task Force, Mid-Continent Oil and Gas Association Glycol Dehydration Study Committee, STAPPA Air Toxics Review Committee, and several committees for the Oklahoma State Department of Education regarding science education. She is a member of the American Conference of Governmental Industrial Hygienists and a diplomat in the American Academy of Sanitarians. She has a degree in environmental health from Old Dominion University and an M.P.H. in Environmental Health and a Ph.D. in Environmental Toxicology from the University of Oklahoma Health Sciences Center.

Diaz, Robert

College of William and Mary

Dr. Robert Diaz is a Professor of Marine Science at the Virginia Institute of Marine Science, College of William and Mary. He received a Ph.D. from the University of Virginia in Marine Science and a Doctor Honoris Causa from Gothenburg University, Sweden, for his contributions to marine and estuarine ecology. In 2011 he was named Virginia Outstanding Scientist of the year. Professor Diaz has over 40 years of experience working on environmental issues in a variety of marine and freshwater habitats around the globe from the intertidal to the deep-sea. He has served on science advisory and review committees for private foundations, state and federal agencies, and international organizations. He specializes in documenting the effects of both natural and human disturbance to ecosystems, and is an internationally recognized expert on animal-sediment-interactions, the effect of eutrophication (over enrichment of the seas) and hypoxia (low dissolved oxygen dead zones) on ecosystem services and functions. Dr. Diaz's research is currently funded by a sub-grant from the Louisiana Universities Marine Consortium funded by BP Gulf Research Initiatives titled The Effects of the Macondo oil Spill on Coastal Ecosystems. Dr. Diaz is assessing effects of spilled oil on bioturbation rates in shallow coastal area of Louisiana.

La Point, Thomas W.

University of North Texas

Dr. Thomas La Point is the former director of the Institute of Applied Sciences at the University of North Texas and is a Professor in the Department of Biological Sciences. He holds a B.S. in Zoology and Physiology from the University of Wyoming, an M.S. in Population Biology from the University of Houston, and a Ph.D. in Aquatic Biology from the Department of Biological Sciences at Idaho State University. Dr. La Point's primary research and teaching interests include contaminant effects on freshwater aquatic communities, specifically how metals and organic contaminants affect benthic population dynamics and freshwater fisheries. He has published on ecosystem measures, contaminant bioaccumulation, and sub-lethal effects on aquatic populations. Dr. La Point has served on several National Science Foundation, U.S. Environmental Protection Agency (EPA), and U.S. Geological Survey panels to review proposals submitted for funding. He is on the editorial board for Chemosphere and Environmental Toxicology and Pharmacology and has served as Editor of the Society of Environmental Toxicology and Chemistry (SETAC) Special Publication Series. His research funding (2010 – present) has come from the U.S. EPA, the National Science foundation (NSF), and City of Denton, Texas. The research topics include round-robin testing for multi-generation tests with mysid shrimp (U.S. EPA); the interaction between water quality and education in urbanizing watersheds (NSF); and non-point source pollution prevention (City of Denton).

Reddy, Ramesh

University of Florida

Dr. K. Ramesh Reddy is a Graduate Research Professor (distinguished professorship) and Chair of Soil and Water Science Department (SWSD) at the University of Florida (UF). He holds a B.S. and M.S from AP Agricultural University-India and a Ph.D. from the Louisiana State University, Baton Rouge, La. Dr. Reddy's research addresses problems in science and technology in topical areas of biogeochemistry with emphasis on macro-elemental cycling; soil and water quality; wetlands and aquatic ecosystem restoration; carbon sequestration and greenhouse gases. Dr. Reddy developed an interdisciplinary program on biogeochemistry of wetlands and aquatic systems through the Wetland Biogeochemistry Laboratory (WBL) established within the SWSD. This led to interdisciplinary work with scientists from various

disciplines including ecology, biology, limnology, and engineering. Dr. Reddy has published 350+ refereed journal articles and book chapters and edited 5 books, and he is the author of one text book. Dr. Reddy has served on numerous advisory committees at state, national, and international levels. He served on the U. S. National Committee on Soil Science, National Academy of Sciences. He currently serves on U. S. National Committee – Everglades Restoration, National Academy of Sciences. Dr. Reddy also served on a U.S. Environmental Protection Agency, Science Advisory Board Panel. He was invited to participate in a think tank meeting hosted by the National Environment Research Council and the Global Environmental Research Committee of the Royal Society, London, England. Dr. Reddy currently serves as wetland consultant with the International Atomic Energy Commission. Dr. Reddy's select awards and honors include: UF-Graduate Research Professor, UF-Research Foundation Professor (1999-2002; 2009-2012); Doctoral Dissertation Advisory /Mentoring Award (2005); Fellow, World Innovation Foundation; Environmental Quality Research Award, American Society of Agronomy (2002); Sigma Xi Senior Faculty Research Award (2002); Soil Science Applied Research Award, Soil Science Society of America (2001); Fellow, American Association for the Advancement of Science; Fellow - Soil Science Society of America (1988); Fellow - American Society of Agronomy (1988); Gama Sigma Delta International Award (2006). Dr. Reddy's research is currently funded by grants from: the Florida Department of Agriculture and Consumer Services (Phosphorus Retention and Storage in Isolated Wetlands); St. Johns River Water Management District (Environmental Effects of Water Withdrawals, Carbon Flux and Loss Rates, and the Environmental Fate of Organic Contaminants); the National Science Foundation (Methanogenisis in the Florida Everglades); the U.S. Department of Interior (Soil Biogeochemistry).

Rosi-Marshall, Emma

Cary Institute of Ecosystem Studies

Dr. Emma J. Rosi-Marshall is an Associate Scientist at the Cary institute of Ecosystem Studies. She holds a Ph.D. and M.S. from the University of Georgia and a B.S. from the University of Michigan. Previously, Dr. Rosi-Marshall held a position as an assistant professor in the Departments of Biology and Natural Science, Loyola University of Chicago. Dr. Rosi-Marshall conducts research on factors that control and influence ecosystem function in human-dominated ecosystems. Her research focuses on aspects of human modifications to freshwater ecosystems such as land use change and restoration, widespread agriculture and associated crop byproducts, urbanization and the release of novel contaminants, and hydrologic modifications associated with large dams. In addition, her research spans a diversity of ecosystems from small streams to large rivers and has been conducted in rivers throughout much of the US. Rosi-Marshall employs a diversity of methods exploring ecological processes including biogeochemistry, production ecology, food webs, carbon cycling and effects of emerging contaminants on ecosystem processes. Rosi-Marshall has received competitive grants from the National Science Foundation (NSF), the U.S. Geological Survey (USGS), and the U.S. Department of Agriculture (USDA) and has published findings from these studies in a diversity of national and international scientific journals. These grants have supported her research on the effects of crop byproducts on aquatic ecosystems (NSF), carbon budgets and energy flow in food webs of the Grand Canyon (USGS), nutrient uptake in large rivers (NSF) and the influence of forest age on nutrient cycling and metabolism of headwater streams (USDA). Rosi-Marshall is also a Co-Investigator on the Baltimore Ecosystem Study Long-term Ecological Research Site (NSF) where she is exploring the influence of emerging contaminants on aquatic ecosystem function. She serves on the editorial board of Ecosystems and has served as a reviewer for the National Science Foundation, USDA and for numerous national and international scientific journals.

Smith, Eric P.

Virginia Polytechnic Institute and State University

Dr. Eric P. Smith is Chair of the Department of Statistics at the Virginia Polytechnic Institute and State University (Virginia Tech). He holds a B.S. in Mathematics from the University of Georgia (1975), and an M.S. from University of Washington (1982) and Ph.D. from University of Washington (1982) in Biomathematics. Dr. Smith has been a member of the Virginia Tech faculty since 1982. His research focuses on the development and application of statistical methods to help understand and solve environmental and ecological problems. Dr. Smith was the Director of the Statistical Consulting Center 1995-2004. In that position he was responsible for providing statistical support to students, faculty and staff and provided training to statistics students on the art of consulting. Dr. Smith has worked on a variety of statistical and scientific problems from areas such as engineering, education and natural resources. He teaches courses on multivariate analysis and linear models (regression, analysis of variance). Dr. Smith is a former Associate Editor of Environmetrics, the Journal of Agricultural, Biological and Environmental Statistics, and the Journal of the American Statistical Association. He is a section editor for the Natural Resources section for the Encyclopedia of Environmetrics. He has supervised 14 Ph.D. students. Dr. Smith's research is currently funded by grants from the U.S. Forest Service (Macroinvertebrates and Air Pollution); the U.S. Forest Service and James Madison University (Resiliency of Brook Trout Habitat to Climate Change, Evaluating Stream Community Responses to Global Climate change); the U.S. Department of Agriculture (Improvement and Marketing of the Food and Agricultural Education Information System); National Oceanic and Atmospheric Administration Fisheries (Model complexity and stock assessment quality: an investigation of the performance of models of different complexity and implications for model selection in fisheries); and BAE Systems (Biometrics Training, Performance and Research Initiative, BTPRI).

Valett, Maurice

University of Montana

Dr. Maurice Valett is a Professor of Systems Ecology at the University of Montana. He holds a B.S. in Animal Biology from Western Washington University (1982), an M.S. in Zoology from the University of Montana (1985), and Ph.D. in Zoology from Arizona State University (1991). Dr. Valett has been a member of the University of Montana faculty since 2009. His research focuses on ecosystem ecology and biogeochemistry, nutrient retention in lotic ecosystems, groundwater-surface water exchange, floodplain river interactions, and wetlands and streams as flow-through systems. Dr. Valett was Associate and Assistant Professor of Ecology at the Virginia Polytechnic Institute and State University from 1998-2009. He was Research Assistant Professor and Visiting Assistant Professor in the Department of Biology at the University of New Mexico from 1991-1994. Dr. Valett is a member of the American Geophysical Union, the American Society of Limnology and Oceanography, the Ecological Society of America, the North American Benthological Society, and the Geological Society of America. He previously served as a member of the National Science Foundation (NSF) Geobiology and Low-Temperature Geochemistry Panel and the NSF Carbon and Water in Earth Sciences Panel. Dr. Valett is associate editor of Limnology and Oceanography, and from 1998 – 2001 was associate editor of the Journal of the North American Benthological Society. Dr. Valett's research is currently funded by grants from the National Science Foundation (Elemental Cycling in Streams, Exurbation and Climate Interaction in the Southeast).

Warren-Hicks, William

Cardno Entrix, Inc.

Dr. William J. Warren-Hicks is Vice President/Technical Director and Biostatistics Practice Leader at Cardno Entrix, Inc. located in Raleigh, NC. He holds a B.S. in Biology from University of Houston (1976), an M.S. in Environmental Toxicology and Statistics from the University of Texas School of Public Health (1979), and a Ph.D. in Environmental Statistics from Duke University (1990). Dr. Warren-Hicks has 30 years of experience providing consulting expertise in the areas of environmental data analysis, uncertainty analysis, Bayesian inference and decision, probabilistic risk methods, survey design, time-series modeling, messy data analysis, hypothesis testing, multivariate analyses, and model validation studies. He has over 134 peer-reviewed publications, 2 books, and 8 book chapters in the areas of environmental statistics, probabilistic modeling, decision sciences, and risk assessment. Dr. Warren Hicks has twenty years expertise in evaluating the precision and accuracy of air quality emissions. The majority of this work was for U.S. EPA Office of Air and Radiation. Dr. Warren-Hicks has managed over 200 projects for clients in all major U.S. Environmental Protection Agency (EPA) programs. He teaches courses at Duke University and Elon University to both undergraduate and graduate students. These courses focus on the analysis of environmental data in risk-based decision making, including uncertainty analysis methods. Dr. Warren-Hicks is the lead instructor for New Advances in Ecological Risk Assessment, given under the Continuing Education Program at Duke University. He developed a course entitled Using Monte Carlo Analysis In The Probabilistic Risk Assessment of Pesticides, a course in uncertainty analysis methods that was given multiple times to EPA's Office of Pesticide Programs (OPP), individual chemical companies, and industry coalitions. Dr. Warren-Hicks was the lead statistician to the Federal Insecticide, Fungicide and Rodenticide Act Environmental Model Validation Task Force (FEMVTF) Statistics Committee in conducting an uncertainty analysis of the PRZM3.12 model. He has consulted on issues associated with the statistical analysis of pesticide data within a risk context for both EPA's OPP and industry. In addition, Dr. Warren-Hicks was an invited speaker and associated lead chapter author of six Society of Environmental Toxicology and Chemistry (SETAC) Pellston Conferences including Sediment Risk Assessment, Multiple Stressors (steering committee member), Probabilistic Risk Assessment of Pesticides, Whole Effluent Toxicity Testing, Potential Risks of Plant Protection Products to Pollinators, and Uncertainty Analysis In Ecological Risk Assessment (chair, lead editor, lead conference organizer, and creator).